Claims 37 - 60, cancelled herewith

61. (new) An image processing method comprising the steps of:

determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel constituting an image is defined as said pixel of interest;

enhancing pixel value of said pixel of interest when said determined value is larger than a particular variance of noise; and

suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise;

wherein each pixel constituting multi-slice images, and the step of enhancing pixel value provides adjustment of pixel values; and further comprising the steps of:

performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment; and

adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

62. (new) The method of claim 61, wherein said suppressing of said pixel value is performed by multiplying by a coefficient of less than one.

63. (new) The method of claim 61, wherein said suppressing of said pixel value is performed by subtracting a predefined numeric value.

A

64. (new) The method of claim 61, wherein said enhancing of said pixel value is performed by multiplying by a coefficient which is equal to or greater than one.

65. (new) The method of claim 61, wherein said enhancing of said pixel value is performed by adding a predetermined numeric value.

66. (new) The method of claim 61, further comprisng the steps of:

determining a residual sum of squares of pixel values for each of a plurality of local regions defined over an entire image;

determining a histogram of said residual sum of squares; and

determining said particular variance of noise based on a residual sum of squares that gives a peak of said histogram.

67. (new) The method of claim 61, wherein said image is of a blood flow image.

68. (new) An image processing apparatus comprising:

first means for determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel constituting an image is defined as said pixel of interes;

second means for enhancing pixel values of said pixel of interest when said determined variance is larger than a particular variance of noise;

third means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise;

wherein each pixel constituting multi-slice images, and

B

wherein said second means comprises means for adjusting said pixel value; and further comprising:

fourth means for performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment; and

fifth means for adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

69. (new) The apparatus of claim 68, wherein said third means comprises means for suppressing said pixel value by multiplying with a coefficient of less than one.

70. (new) The apparatus of claim 68, wherein said third means comprises means for suppressing said pixel values by subtracting a predefined numeric value.

71. (new) The apparatus of claim 68, wherein said second means comprises means for enhancing said pixel value by multiplying with a coefficient which is equal to or greater than one.

72. (new) The apparatus of claim 68, wherein said second means comprises means for enhancing said pixel value by adding a predefined numeric value.

73. (new) The apparatus of claim 68, further comprising:

sixth means for determining said particular variance of noise, wherein said sixth means comprises:

means for determining a residual sum of squares of pixel values for each of a plurality of local regions defined

C

over an entire image;

means for determining a histogram of said residual sum of squares; and

means for determining said particular variance of noise based on a residual sum of squares that gives a peak of said histogram.

74.(new) The apparatus of claim 68, wherein said image is of a blood flow image.

75. (new) An imaging apparatus for producing an image based on signals collected from an object, said apparatus comprising:

means for determining a variance of pixel values in a local region to which a pixel of interest belongs, said pixel of interest being defined as being each pixel constituting an image;

means for enhancing said pixel value of said pixel of interest when said determined variance is larger than a particular variance of noise; and

means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise; wherein

each pixel constitutes multi-slice images; and wherein said means for determining a variance of pixel values comprises means for adjusting said pixel values; and further comprising:

means for performing maximum intensity projection on said

D

multi-slice images subjected to said pixel value adjustment; and

means for adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

76. (new) An image processing method comprising the steps of:

obtaining a predetermined value of noise variance;

determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel consti-tuting an image is defined as said pixel of interest;

enhancing pixel value of said pixel of interest when said determined variance is larger than said predetermined value of noise variance; and

suppressing said pixel value of said pixel of interest when said determined variance is less than said predetermined value of noise variance.

77.(new) The method of claim 76, wherein each pixel consti-tutes multi-slices, and the step of enhancing pixel value provides adjustment of pixel values; and further comprising the step of:

performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment.

78. (new) An image processing apparatus comprising:

first means for determining a particular variance of noise;

second means for determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each

E

pixel constituting an image is defined as said pixel of interest;

third means for enhancing pixel values of said pixel of interest when said determined variance is larger than said particular variance of noise; and

fourth means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise.

79.(new) The apparatus of claim 78, wherein each pixel constituting multi-slice images, and wherein said third means comprises means for adjusting said pixel values; and further comprising:

fifth means for performing maxium intensity projection on said multi-slice images subjected to said pixel value adjustment.

80. (new) An imaging apparatus for producing an image based on signals collected from an object, said apparatus comprising:

means for determining a particular variance of noise;

means for determining a variance of pixel values in a local region to which a pixel of interest belongs, said pixel of interest being defined as being each pixel constituting an image;

means for enhancing said pixel values of said pixel of interest when said determined variance is larger than said particular variance of noise; and

means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise.

81.(new) The imaging apparatus of claim 80, wherein each pixel constituting multi-slice images, and whereinssaid means

F

for determining variance of pixel values comprises means for adjusting said pixel values; and further comprising:

means for performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment.

82. (new) A computer-readable medium having recorded thereon computer executable instructions for causing a computer to implement the functions of:

determining a particular variance of noise;

determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel constituting an image is defined as said pixel of interest;

enhancing said pixel value of said pixel of interest when said determined variance is larger than said particular variance of noise; and

suppressing said pixel value of said pixel of interest when said determined value is less than said particular variance of noise.

83. (new) The recording medium of claim 82, wherein each pixel constituting multi-slice images, and the step of enhancing pixel value provides adjustment of pixel values; and further comprising the function of:

performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment.

84. (new) The recording medium of claim 83, further comprising the function of:

adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.